

WHAT IS CLAIMED IS:

1. A pixel driving circuit for use in an active matrix electron luminescent display, switched between a memorizing state and an emission state according to operations of a first and a second scan lines, comprising:

a transistor;

a capacitor having a first and a second ends coupled to the gate electrode of said transistor and a ground voltage, respectively; and

an organic light-emitting diode having a P and an N electrode coupled to the source electrode of said transistor and said ground voltage, respectively,

wherein said capacitor is charged by a driving current received from a data line to generate a specified voltage to bias said transistor and said organic light-emitting diode in said memorizing state, and said transistor and said organic light-emitting diode are further biased with said specified voltage in said emission state.

2. The pixel driving circuit according to claim 1 further comprising a memorizing state circuit coupled to said first scan line, said data line, the gate electrode of said transistor and the drain electrode of said transistor, and permitting said driving current from said data line to be transmitted therevia to charge said capacitor and pass through said transistor and said organic light-emitting diode in said memorizing state.

3. The pixel driving circuit according to claim 1 further comprising an emission state circuit coupled to a voltage source, the drain electrode of said transistor and said second scan line, and generating a current in response to said specified voltage to pass through said transistor and said organic light-emitting diode in said emission state.

4. The pixel driving circuit according to claim 1 further comprising:

a first switch unit having a first and a second ends coupled to said data line and the drain electrode of said transistor, respectively, and a first control end coupled to said first scan line; and

a second switch unit having a third and a fourth ends coupled to the drain electrode and the gate electrode of said transistor, respectively, and a second control end coupled to said first scan line.

5. The pixel driving circuit according to claim 4 further comprising a third switch unit having a fifth and a sixth ends coupled to a voltage source and the drain electrode of said transistor, respectively, and a third control end coupled to said second scan line.

6. The pixel driving circuit according to claim 1 further comprising:

a first switch unit having a first and a second ends coupled to said data line and the drain electrode of said transistor, respectively, and a first control end coupled to said first scan line; and

a second switch unit having a third and a fourth ends coupled to said data line and the gate electrode of said transistor, respectively, and a second control end coupled to said first scan line.

7. The pixel driving circuit according to claim 6 further comprising a third switch unit having a fifth and a sixth ends coupled to a voltage source and the drain electrode of said transistor, respectively, and a third control end coupled to said second scan line.

8. The pixel driving circuit according to claim 1 wherein said pixel driving circuit is switched between said memorizing state and said emission state in response to a clock signal for controlling said operations of said first and said second scan lines.

9. A pixel driving circuit for use in an active matrix electron luminescent

display, switched between a memorizing state and an emission state according to operations of a first and a second scan lines, comprising:

a transistor;

a capacitor having a first and a second ends coupled to the gate electrode of said transistor and a voltage source, respectively; and

an organic light-emitting diode having a P and an N electrode coupled to said voltage source and the source electrode of said transistor, respectively,

wherein said capacitor is charged by a driving current transmitted from said voltage source to generate a specified voltage to bias said transistor and said organic light-emitting diode in said memorizing state, and said transistor and said organic light-emitting diode are further biased with said specified voltage in said emission state.

10. The pixel driving circuit according to claim 9 further comprising a memorizing state circuit coupled to said first scan line, said data line, the gate electrode of said transistor and the drain electrode of said transistor, and permitting said driving current from said voltage source to be transmitted therevia to charge said capacitor and pass through said transistor, said data line and said organic light-emitting diode in said memorizing state.

11. The pixel driving circuit according to claim 9 further comprising an emission state circuit coupled to a ground voltage, the drain electrode of said transistor and said second scan line, and generating a current in response to said specified voltage to pass through said transistor and said organic light-emitting diode in said emission state.

12. The pixel driving circuit according to claim 9 further comprising:

a first switch unit having a first and a second ends coupled to said data line and the drain electrode of said transistor, respectively, and a first control end coupled

to said first scan line; and

a second switch unit having a third and a fourth ends coupled to the drain electrode and the gate electrode of said transistor, respectively, and a second control end coupled to said first scan line.

13. The pixel driving circuit according to claim 12 further comprising a third switch unit having a fifth and a sixth ends coupled to a ground voltage and the drain electrode of said transistor, respectively, and a third control end coupled to said second scan line.

14. The pixel driving circuit according to claim 9 further comprising:

a first switch unit having a first and a second ends coupled to said data line and the drain electrode of said transistor, respectively, and a first control end coupled to said first scan line; and

a second switch unit having a third and a fourth ends coupled to said data line and the gate electrode of said transistor, respectively, and a second control end coupled to said first scan line.

15. The pixel driving circuit according to claim 14 further comprising a third switch unit having a fifth and a sixth ends coupled to a ground voltage and the drain electrode of said transistor, respectively, and a third control end coupled to said second scan line.

16. The pixel driving circuit according to claim 9 wherein said pixel driving circuit is switched between said memorizing state and said emission state in response to a clock signal for controlling said operations of said first and said second scan lines.

17. A method for driving a pixel unit of an active matrix electron luminescent display, said pixel unit comprising a capacitor, a transistor and an organic light-emitting diode, said method comprising steps of:

forming a current path for a driving current to charge said capacitor to a specified voltage when said first scan line is operating; and

generating a biasing current in response to said specified voltage to pass through said organic light-emitting diode when said second line is operating,

wherein said specific voltage biases the gate electrode of said transistor and said organic light-emitting diode serially coupled to each other.

18. The method according to claim 17 wherein said current path permits said driving current to be transmitted between a data line and said capacitor so to charge said capacitor to a specified voltage.

19. The method according to claim 17 wherein the P electrode of said organic light-emitting diode is coupled to the source electrode of said transistor, said capacitor has a first and a second end coupled to the gate electrode of said transistor and the N electrode of said organic light-emitting diode, and each of said driving current and said biasing current passes through the source and the drain electrode of said transistor.

20. The method according to claim 17 wherein the N electrode of said organic light-emitting diode is coupled to the drain electrode of said transistor, said capacitor has a first and a second end coupled to the gate electrode of said transistor and the P electrode of said organic light-emitting diode, and each of said driving current and said biasing current passes through the source and the drain electrode of said transistor.